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BUSINESS ACTIVITY IN METROPOLITAN AREAS

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Michigan has a long history as a cyclically sensitive state because of its heavy dependence on the volatile automobile industry. During the past ten years, the national economy has exhibited a fairly high degree of cyclical instability; consequently, Michigan's widely recognized boom and bust cycle has been repeated.

In 1977, Michigan's population was estimated at 9.1 million. About 80 percent of state residents lived in the eleven Standard Metropolitan Statistical Areas (SMSAs) in the southern half of the lower peninsula, stretching from the Detroit SMSA in the east to the Muskegon–Norton Shores–Muskegon Heights SMSA in the west. These eleven SMSAs can be viewed as open regional economies which vary in size, industrial structure, and rate of growth. The six-county Detroit SMSA is the largest, having a population more than seven times that of the Grand Rapids SMSA, which ranks second in size. In addition, industrial activity in Michigan is concentrated in these eleven SMSAs. For example, in 1977, 86.6 percent of all manufacturing jobs were located in these areas, as were 89.4 percent of all jobs in the volatile durable goods industries. Of course, the Detroit SMSA dominates, accounting for about one-half of total wage and salary employment in the state and slightly more than one-half of manufacturing and nonmanufacturing employment. While the Detroit SMSA has a considerable effect on overall business activity in Michigan, the behavior of the other ten also contributes. Given the differences in the structural characteristics of the eleven SMSAs, short-run variations in local business activity can be expected.

This article reports on one aspect of intrastate business activity — magnitude of short-run swings in activity in the eleven SMSAs. (Other characteristics of local business activity, such as timing, duration, and rate of growth, are examined in detail in a forthcoming publication.)[1] Fourteen quarterly economic indicators were assembled for each SMSA and for the state. These indicators, shown in Tables 1, 2, and 3, cover labor market, construction, and banking activity from the late 1960s to the late 1970s. The amplitude measures shown in the tables reveal wide disparities among the state's eleven SMSAs during expansion and recession phases of the national business cycle in the 1970s.

It should be noted that upswings and downswings in local economic indicators generally conformed to national business cycle patterns. In other words, during the most recent national recession, those local series that would be expected to decline did so (manufacturing employment, for example), while those series that typically rise during a business slump (the unemployment rate, for example) behaved as expected in most cases. There were some notable exceptions, however. Two SMSAs, Ann Arbor–

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by Paul J. Kozlowski

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Ypsilanti and Flint, did not experience a cyclical decline in new building permits in the 1969–1970 national recession. Also, the Ann Arbor–Ypsilanti, Muskegon, and Saginaw SMSAs experienced a slowdown in growth, not an absolute decline, in the current dollar volume of total loans during the 1973–1975 recession. Finally, during that recession, only three of eleven SMSAs experienced a decline in government employment, and only seven of eleven suffered a decrease in the current dollar volume of commercial and industrial loans that can be classified as cyclical.

Although cyclical swings in business activity in Michigan SMSAs conformed to national patterns, there were substantial differences among the eleven areas in the amplitude of fluctuations in labor market, construction, and banking processes. Table 1 presents the amplitudes of the cyclical expansion phases that generally conformed to the national business cycle expansion of 1970–1973. The measures shown in the table represent absolute values of the percentage change in each series from its initial trough to terminal peak. Table 2 shows the absolute values of percentage changes (peak to trough) in each series for the cyclical phase conforming to the 1973–1975 national recession. Finally, Table 3 gives the absolute values of percentage changes in each series for the expansion phase conforming to the most recent national business cycle expansion, which began in the first quarter of 1975. The latter measures represent changes from the trough value to a most recent high or low. In many cases, these measures may reflect incomplete phases, because it is still not clear whether the national and local expansions have ended and business contractions are under way.

MANUFACTURING

Note that, among the labor market indicators, manufacturing employment and the average workweek of manufacturing workers exhibited sizable upswings and downswings in the Ann Arbor–Ypsilanti, Flint, Lansing–East Lansing, and Saginaw SMSAs. This is not surprising considering that these areas are heavily dependent on the automobile industry. During the 1973–1975 recession, manufacturing employment fell 26 percent in Ann Arbor–Ypsilanti, 25.5 percent in Flint (and Jackson), 24.5 percent in Lansing–East Lansing, and 20.6 percent in Saginaw; hours worked fell 13.6, 14.5, 14.6, and 12.5 percent, respectively. Tables 1 and 3 show that the two expansions were also relatively strong in each of those four areas, resulting in a high degree of cyclical sensitivity in their manufacturing sectors. In contrast, the two areas least dependent on durable goods production, the Battle Creek and Kalamazoo-Portage SMSAs, exhibited the lowest degree of cyclical sensitivity in manufacturing. During the 1973–1975 recession, manufacturing employment fell 13.6 per-

TABLE 1
Amplitude of Expansions in Specific Series Conforming to the National Business Expansion of 1970–1973[a]

Series	Ann Arbor–Ypsilanti	Battle Creek	Bay City	Detroit	Flint	Grand Rapids	Jackson	Kalamazoo–Portage	Lansing–East Lansing	Muskegon–Norton Shores–Muskegon Heights	Saginaw	Michigan
Total wage and salary employment	20.4	9.1	19.8	13.4	40.7	19.4	17.4	17.1	23.9	13.5	31.3	15.2
Manufacturing employment	38.0	8.9	20.9	19.4	93.5	24.0	21.7	14.0	57.4	14.2	64.7	23.2
Nonmanufacturing employment	34.5	9.7	23.0	12.0	11.4	18.1	23.2	b	22.6	14.2	19.8	14.5
Government employment	b	14.9	b	b	21.5	b	b	b	b	b	b	b
Unemployment rate	41.7	29.7	48.2	35.8	57.5	34.2	46.7	38.4	45.0	43.0	37.3	35.7
Average weekly initial claims for unemployment	55.8	40.1	64.3	60.6	69.7	69.5	66.5	44.4	64.6	58.1	70.4	52.6
Average workweek, prod. workers, mfg.	16.0	9.3	b	15.4	18.8	3.8	14.9	4.4	19.3	12.1	18.8	11.3
New building permits	130.1	259.0	175.1	60.9	104.5	107.4	135.2	200.0	148.4	115.8	60.0	61.3
Construction employment	30.0	23.5	70.0	9.6	21.6	32.1	33.3	29.4	21.6	43.8	32.1	15.2
Deflated demand deposits[c]	13.0	d	15.5	26.3	24.5	21.2	20.2	40.2	26.7	19.8	23.4	24.2[e]
Deflated total deposits[f]	19.3	d	22.8	21.6	33.5	26.5	26.1	33.5	17.3	34.1	28.2	20.0[e]
Total loans[f]	b	d	26.2	47.2	62.5	59.6	56.6	69.6	40.6	b	b	b
Comm. and ind. loans[e]	b	d	16.8[f]	40.2[f]	44.4[f]	86.0	50.5	b	b	b	91.1	39.7
Consumer Installment loans[e]	48.0	d	47.3[f]	68.8	58.0	77.6	75.4[f]	b	72.9[f]	86.3	142.7[f]	59.9

a. Amplitude measures represent percentage changes from trough to peak, disregarding the sign, for specific phases conforming to the 1970–1973 national business cycle expansion.
b. Expansion phase not discernible.
c. Except for Ann Arbor–Ypsilanti and Saginaw, the beginning value of the series was chosen as the initial trough value for the expansion period.
d. For Battle Creek, data prior to 1971 were not available; therefore, the entire expansion phase could not be measured.
e. Based on seasonally unadjusted data.
f. Beginning value of the series chosen as initial trough value for the expansion period.

cent in the Kalamazoo-Portage SMSA. This was the mildest contraction among Michigan metropolitan areas—nearly one-half the magnitude of the slump in the Ann Arbor–Ypsilanti SMSA.

The swings in total wage and salary employment reflect the varying degrees of volatility of local manufacturing employment, but not perfectly. Total wage and salary employment exhibited the greatest cyclical sensitivity in the Flint SMSA, the least in the Kalamazoo-Portage SMSA. Despite highly volatile manufacturing sectors in the Ann Arbor–Ypsilanti and Lansing–East Lansing SMSAs, cyclical declines in total wage and salary employment were relatively mild due to the moderating influence of the large and fairly stable nonmanufacturing and government sectors in each area.

UNEMPLOYMENT

The Ann Arbor–Ypsilanti, Flint and Saginaw SMSAs also exhibited sizable swings in average weekly initial claims for unemployment insurance. Comparable data from 1968 were available, and behavior during the two recessions can be compared. During the 1969–1970 recession, average weekly initial claims rose 337.2 percent in the Ann Arbor–Ypsilanti SMSA, 478.4 percent in the Flint SMSA, and 456.1 percent in the Saginaw SMSA; these areas ranked fourth, first, and second, respectively. In the Lansing–East Lansing SMSA, which ranked third, average weekly initial claims rose 342.6 percent. Table 2 shows that the Ann Arbor–Ypsilanti, Flint, and Saginaw SMSAs ranked first, second, and third, respectively, in terms of the cyclical rise in average weekly initial claims during the 1973–1975 recession. Although that business slump was more severe than the one in 1969–1970, average weekly initial claims actually rose less in the Bay City, Lansing–East Lansing, and Muskegon SMSAs. In all other SMSAs, in the state, and in the nation, the cyclical upswing in average weekly initial claims during the 1973–1975 recession was substantially larger than during the 1969–1970 period.

During the two business expansion periods, sizable declines in average weekly initial claims accompanied employment upswings in all the metropolitan areas. Tables 1 and 3 show that, so far in the expansion that began in 1975, the decrease in average weekly initial claims exceeds that of the previous expansion (1970–1973) in all areas except Grand Rapids, Jackson, Lansing–East Lansing, and Muskegon. Despite declines since the last recession, however, average weekly initial claims in all Michigan metropolitan areas at the end of 1978 remained above their prerecession lows. The business expansions in these local areas, therefore, have failed to pull average weekly initial

(Continued on page 5)

TABLE 2
Amplitude of Contractions in Specific Series Conforming to the 1973–1975 National Recession[a]

Series	Ann Arbor–Ypsilanti	Battle Creek	Bay City	Detroit	Flint	Grand Rapids	Jackson	Kalamazoo–Portage	Lansing–East Lansing	Muskegon–Norton Shores–Muskegon Heights	Saginaw	Michigan
Total wage and salary employment	8.0	6.3	6.0	8.1	13.4	5.1	8.3	3.2	3.9	4.3	7.7	6.9
Manufacturing employment	26.0	15.7	19.2	20.1	25.5	18.3	25.5	13.6	24.5	15.3	20.6	18.7
Nonmanufacturing employment	5.1	2.2	2.2	3.6	5.5	1.2	4.6	b	1.7	2.4	3.7	3.4
Government employment	b	8.6	b	b	8.3	b	4.7	b	b	b	b	b
Unemployment rate	231.0	146.2	150.9	140.4	220.4	148.0	212.5	160.0	204.5	153.8	192.9	148.1
Average weekly initial claims for unemployment[c]	638.8 (337.2)	396.7 (104.6)	301.7 (324.8)	375.1 (237.3)	522.7 (478.4)	452.6 (137.7)	282.0 (253.8)	258.0 (176.9)	222.9 (342.6)	198.3 (227.2)	503.9 (456.1)	301.1 (193.2)
Average workweek, prod. workers, mfg.	13.6	5.3	b	12.5	14.5	5.3	7.6	7.0	14.6	7.1	12.5	9.7
New building permits[c]	88.6 (b)	84.5 (66.6)	72.3 (54.4)	67.5 (29.3)	79.6 (b)	46.3 (43.0)	33.9 (33.3)	75.3 (58.3)	71.2 (63.4)	72.7 (33.1)	73.2 (31.5)	56.2 (21.5)
Construction employment	38.4	33.3	47.1	24.9	33.9	20.7	45.0	18.2	24.2	13.0	40.5	23.5
Deflated demand deposits	21.6	28.9	31.8	29.0	26.7	24.4	26.4	25.1	28.6	26.4	19.9	31.1[d]
Deflated total deposits	8.4	15.7	17.8	11.8	13.4	9.1	10.3	14.7	15.7	11.0	6.0	11.2[d]
Total loans	b	9.8	4.1	7.0	4.8	4.8	6.4	5.1	4.8	b	b	b
Comm. and ind. loans[d]	b	26.1	21.4	7.3	6.3	5.6	18.3	b	b	b	12.2	0.8
Consumer installment loans[d]	4.3	32.5	9.0	9.8	6.0	8.7	14.4	b	8.4	6.3	6.2	6.6

a. Amplitude measures represent percentage changes from peak to trough, disregarding the sign, for specific phases conforming to the 1973–1975 national business cycle contraction.
b. Contraction phase not evident.
c. Numbers in parentheses are comparable measures for the 1969–1970 recession.
d. Measures based on seasonally unadjusted data.

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Michigan Economic Indicators

Item	Year previous of latest month	Previous month	Latest month
Manufacturing workers:			
Average weekly hours, Michigan	44.1	40.5	40.6 (Sep.)
Average weekly hours, U.S.	40.7	40.0	40.3 (Sep.)
Average hourly earnings, Michigan ($)	8.23	8.61	8.73 (Sep.)
Average hourly earnings, U.S. ($)	6.28	6.69	6.80 (Sep.)
U.S. motor vehicle production (units)	1,279,469	805,186	1,022,601 (Oct.)
Michigan electricity usage (mil. kwh.)	6,158	6,008	6,082 (Aug.)
Industrial (mil. kwh.)	2,869	2,799	2,709 (Aug.)
Residential (mil. kwh.)	1,832	1,784	1,890 (Aug.)
Raw steel production:			
Michigan (000 net tons)	1,035	819	823 (Oct.)
United States (000 net tons)	12,105	10,541	10,810 (Oct.)
Consumer price index (1967 = 100)			
Detroit area	227.2	255.4	257.0 (Sep.)
United States	231.8	257.1	259.8 (Sep.)
U.S. wholesale price index (1967 = 100)	214.9	241.7	245.2 (Oct.)
Michigan farm prices received index (1967 = 100)	210	230	228 (Oct.)

SOURCES: U.S. Bureau of the Census; U.S. Bureau of Labor Statistics; Michigan Crop Reporting Service; Motor Vehicle Manufacturers Association, Inc.; American Iron and Steel Institute; and Edison Electric Institute.

Contracts for Future Building, First 9 Months: 1978 and 1979

(Thousands of dollars)

Area	Nonresidential			Residential			Total[a]		
	1978	1979	Percentage change	1978	1979	Percentage change	1978	1979	Percentage change
Ann Arbor	51,478	61,493	+ 19	70,798	59,641	− 16	122,276	121,134	− 1
Battle Creek	24,017	18,679	− 22	24,962	32,003	+ 28	48,979	50,682	+ 3
Bay City	7,436	7,823	+ 5	13,909	11,669	− 16	21,345	19,492	− 9
Detroit	657,000	792,791	+ 21	813,704	915,666	+ 13	1,470,704	1,708,457	+ 16
Flint	58,828	59,715	+ 2	74,295	77,458	+ 4	133,123	137,173	+ 3
Grand Rapids	128,442	223,407	+ 74	154,725	137,745	− 11	283,167	361,152	+ 28
Jackson	11,568	14,950	+ 29	17,865	15,233	− 15	29,433	30,183	+ 3
Kalamazoo-Portage	16,753	38,354	+100	65,611	54,874	− 16	82,364	93,228	+ 13
Lansing–East Lansing	72,278	63,547	− 12	93,047	131,845	+ 42	165,325	195,392	+ 18
Muskegon–Norton Shores–Muskegon Heights	21,032	16,865	− 20	26,011	22,550	− 13	47,043	39,415	− 16
Saginaw	55,298	29,009	− 48	40,828	46,225	+ 13	96,126	75,234	− 22
Michigan	1,308,442	1,509,764	+ 15	1,848,624	1,967,790	+ 6	3,157,066	3,477,554	+ 10
United States	34,129,875	38,243,731	+ 12	57,177,857	58,871,199	+ 3	91,307,732	97,114,930	+ 6

SOURCE: F. W. Dodge Division of McGraw-Hill Information Systems Company, news releases.

NOTE: Battle Creek includes Barry and Calhoun counties; Detroit includes Lapeer, Livingston, Macomb, Oakland, St. Clair, and Wayne counties; Flint includes Genesee and Shiawassee counties; Grand Rapids includes Kent and Ottawa counties; Kalamazoo-Portage includes Kalamazoo and Van Buren counties; Lansing–East Lansing includes Clinton, Eaton, Ingham, and Ionia counties; and Muskegon–Norton Shores–Muskegon Heights includes Muskegon and Oceana counties.

a. Excludes nonbuilding construction contracts. This category comprises streets and highways, bridges, dams, reservoirs, river and harbor developments, sewerage and water supply systems, missile and space flight facilities, airports, utilities, and communication systems. For Michigan the 1978 and 1979 figures for nonbuilding construction contracts were $1,564,828,000 and $724,795,000 respectively, or a decrease of 54 percent. U.S. figures for nonbuilding construction contracts were $31,529,674,000 and $31,896,522,000, or an increase of 1 percent.

Business Activity In Metropolitan Areas

(Continued from page 3)

claims down enough to offset the sizable increases that occurred during the recession. Consequently, this series exhibits an upward trend over the entire period in all Michigan metropolitan areas and in the state as a whole, a phenomenon also noticeable nationwide.

The behavior of the local unemployment rates is similar: The recession led to sizable upswings, and, in most cases, declines during the recent expansion have not offset earlier increases. The hardest hit areas during the most recent recession, that is, those with large peak-to-trough percentage changes, tended to be the areas in which the slump in manufacturing employment was particularly severe—Ann Arbor–Ypsilanti, Flint, Jackson, Lansing–East Lansing, and Saginaw. In fact, the correlation between the amplitudes of those two series for the recession period is pronounced, which indicates a strong association between the magnitudes of the contraction phases of manufacturing employment and the jobless rate across Michigan metropolitan areas. This positive relationship is also evident during expansions, although the degree of association is not as strong as during recessions. What this suggests is that metropolitan areas in Michigan that have a large and highly volatile manufacturing base also are susceptible to sizable upswings in unemployment during business slumps. The Ann Arbor–Ypsilanti and Flint SMSAs are excellent examples. Both experienced sharp declines in manufacturing employment during the 1973–1975 recession, resulting from the decline in activity in the automobile industry. The quarterly unemployment rate in the Ann Arbor–Ypsilanti SMSA rose from a seasonally adjusted 4.2 percent to 13.9 percent, and in the Flint SMSA it rose from 5.4 percent to 17.3 percent. The latter represents the highest quarterly jobless rate among Michigan metropolitan areas during the most recent recession. At the other extreme is the Kalamazoo–Portage SMSA, which experienced the mildest slump in manufacturing employment; its jobless rate rose from 4.5 percent to 11.7 percent. Although the latter was well above the national average, it was below the statewide high of 13.4 percent and the lowest among the eleven metropolitan areas. By the end of 1978, the unemployment rate in almost all Michigan metropolitan areas was still above pre-recession lows. The only exception was the Grand Rapids SMSA, where the jobless rate fell to a seasonally adjusted 4.8 percent in the first quarter of 1978, just below its pre-recession low of 5 percent.

CONSTRUCTION

The two indicators of local construction activity reveal a high degree of cyclical sensitivity in Michigan SMSAs. In all areas, the total amplitude of the fluctuations in new building permits for private housing exceeded that of the

TABLE 3
Amplitude of Expansions in Specific Series Conforming to the National Business Expansion Starting in 1975[a]

Series	Ann Arbor–Ypsilanti	Battle Creek	Bay City	Detroit	Flint	Grand Rapids	Jackson	Kalamazoo–Portage	Lansing–East Lansing	Muskegon–Norton Shores–Muskegon Heights	Saginaw	Michigan
Total wage and salary employment	21.4	10.5	19.5	13.5	27.9	17.5	8.8	12.9	17.2	10.8	23.3	15.5
Manufacturing employment	46.1	4.9	39.3	18.6	40.5	29.0	17.8	18.1	35.3	11.7	34.5	20.0
Nonmanufacturing employment	15.8	15.5	15.2	13.2	25.4	12.9	10.9	b	13.9	15.6	14.7	14.9
Government employment	b	20.8	b	b	24.5	b	9.9	b	b	b	b	b
Unemployment rate	64.0	50.8	57.3	48.8	59.5	61.3	55.2	53.0	55.2	52.1	58.5	50.0
Average weekly initial claims for unemployment	77.3	66.5	72.8	62.2	75.9	67.4	59.9	59.8	51.8	48.4	85.6	59.2
Average workweek, prod. workers, mfg.	13.2	3.2	b	11.8	22.7	7.4	10.8	6.0	14.6	8.4	19.9	9.3
New building permits	162.9	240.3	143.9	93.8	194.7	82.9	141.8	212.1	132.1	196.5	79.9	60.1
Construction employment	37.5	21.4	100.0	52.0	87.8	29.5	54.5	19.4	14.9	50.0	40.9	47.5
Deflated demand deposits	14.8	19.0	14.3	16.7	26.7	22.2	15.4	11.2	9.5	6.9	21.6	19.4[c]
Deflated total deposits	19.6	9.7	15.2	8.5	18.8	14.8	6.9	9.1	7.1	8.1	17.1	9.5[c]
Total loans	b	41.7	89.0	29.2	42.5	40.7	27.3	32.1	26.3	b	b	b
Comm. and ind. loans[c]	b	53.9	118.1	32.2	b	57.7	b	b	b	b	87.9	33.4
Consumer installment loans[c]	72.1	49.7	101.0	54.7	80.9	49.6	35.5	b	34.8	40.0	54.3	51.4

a. Amplitude measures represent percentage changes from trough to the most recent high or low, disregarding the sign, for specific phases conforming to the national business cycle expansion that began in early 1975. These measures are preliminary since expansion phases may be incomplete.
b. Expansion phase not discernible.
c. Based on seasonally unadjusted data.

state and the nation. With few exceptions, this also was the case for specific contraction and expansion phases. The two recession periods are quite revealing. All metropolitan areas except Ann Arbor–Ypsilanti and Flint experienced larger downswings in new building permits than did the state as a whole during the 1969–1970 recession. The Ann Arbor–Ypsilanti and Flint SMSAs did experience contractions from the mid- to the late 1960s, but they did not conform to the national recession. As Table 2 shows, only the Grand Rapids and Jackson SMSAs suffered less severe declines than did the state during the 1973–1975 slump. The most severe contractions occurred in the Ann Arbor–Ypsilanti, Battle Creek, and Flint SMSAs. However, as Table 2 shows, many other metropolitan areas experienced declines that were only slightly milder than that of the state as a whole. With only two exceptions, then, the drop in new building permits was sharp in Michigan metropolitan areas during the mid-1970s. Table 3 shows, however, that the upswings following the most recent recession were also sizable, with the largest relative increases occurring in the Battle Creek and Kalamazoo-Portage SMSAs. Nevertheless, new building permit levels in 1978 were below their pre-recession peaks in all Michigan metropolitan areas except Jackson. This situation is not unusual since both the statewide and nationwide series have also failed to surpass their previous peaks during the recent business expansion.

The behavior of construction employment was similar. The magnitudes of the upswings in this local series during the 1970–1973 business expansion exceeded the statewide gain in all metropolitan areas except Detroit (see Table 1). Table 2 shows that the slump during the mid-1970s was more severe than in the state as a whole in all metropolitan areas except Grand Rapids, Kalamazoo-Portage, and Muskegon. Note that the Grand Rapids SMSA was the only metropolitan area in the state to experience a relatively mild slump in construction employment and new building permits. Interestingly, the Jackson SMSA suffered the largest relative drop in construction employment and the mildest decrease in new building permits among the eleven SMSAs. Table 3 shows that in only five of eleven metropolitan areas has construction employment expanded more than it has statewide from the trough to the most recent high. In nine of eleven areas, the most recent expansion of construction employment exceeded the 1970–1973 upswing. The Grand Rapids and Kalamazoo-Portage SMSAs are the two exceptions, but those areas also experienced relatively mild contractions during the recession. By the end of 1978, construction employment had failed to reach pre-recession levels in four areas: Ann Arbor–Ypsilanti, Battle Creek, Jackson, and Lansing–East Lansing. The latter area has exhibited the most sluggish upward trend.

BANKING

In the banking sector, the Bay City SMSA suffered the most severe downswing during the recession in deflated demand and total deposits (current dollar values adjusted for price changes), with declines of 31.8 percent and 17.8 percent, respectively. The Saginaw SMSA, in contrast, experienced the mildest setbacks in these two series, despite a rather sizable drop in employment. The Flint SMSA, another volatile area in terms of employment and building activity, did not exhibit extreme declines in banking activity. Deflated total deposits fell 13.4 percent in the Flint SMSA, and the current dollar volume of total loans fell 4.8 percent. In comparison, the Kalamazoo-Portage SMSA, a much more stable area in terms of employment, experienced slightly greater declines in deflated total deposits and total loans during the recession—14.7 and 5.1 percent, respectively. The Battle Creek SMSA, which also experienced relatively mild declines in employment, suffered substantial drops in total loans, commercial and industrial loans, and consumer installment loans. In the latter case, the Battle Creek area experienced a decline of 32.5 percent in current dollar volume, the largest contraction by far among the eleven SMSAs, whereas the adjacent Kalamazoo-Portage SMSA suffered no decline during the recession. Also, along with several other areas, the Kalamazoo-Portage SMSA experienced no measurable cyclical decline in commercial and industrial loans.

Table 3 shows that banking activity picked up substantially during the recent business expansion, except for deflated demand deposits. The latter have increased at a rather sluggish pace, and by mid-1978 they were still below pre-recession peaks in all Michigan metropolitan areas. Although deflated total deposits rose during the business expansion, they were below their previous peaks in all areas except the Ann Arbor–Ypsilanti, Grand Rapids, and Saginaw SMSAs. The current dollar volume of loans has expanded considerably in all areas since the most recent recession. Table 3 shows that the greatest relative increase occurred in the Bay City SMSA, where the current dollar volume of total loans has risen 89 percent since the recession, and commercial and industrial loans and consumer installment loans have more than doubled.

In summary, banking activity in Michigan SMSAs exhibited varying degrees of cyclical sensitivity during the period examined. Only three areas—Ann Arbor–Ypsilanti, Muskegon, and Saginaw—escaped absolute declines in the current dollar volume of total loans during the 1973–1975 recession. Also, the Kalamazoo-Portage SMSA was the only metropolitan area in which consumer installment loans did not fall during that slump. All areas, however, experienced declines in the deflated values of total and demand deposits, with the latter exhibiting sluggish recoveries.

CONCLUDING REMARKS

The measurements presented above reveal differences in business activity among Michigan metropolitan areas over roughly the past ten years. The amplitude measures show varying degrees of cyclical sensitivity among Michigan SMSAs in terms of labor market, construction, and banking activity. It should be noted that these results refer only to the magnitude of swings in local business activity during those years, and caution is urged regarding generalizations or forecasts about local activity in the future. The measures of local performance presented here, along with the extensive results offered in the forthcoming Upjohn publication, provide considerable information about business activity in the metropolitan economies of Michigan, and these data form a solid base for analyzing business conditions within the state.[2]

CITATIONS

1. Paul J. Kozlowski, *Business Conditions in Michigan Metropolitan Areas* (Kalamazoo: Upjohn Institute for Employment Research, 1979).
2. Ibid.

BRIEFS

Yardsticks of well-being in various areas of the country are examined by Peggy J. Ross, Herman Bluestone, and Fred K. Hines in the recently released *Indicators of Social Well-Being for U.S. Counties,* a research report of the U.S. Department of Agriculture. Median family income, the proportion of families with employed male heads not in poverty, school attainment, and proportion of dwelling units with complete plumbing were combined to form Factor I, an indicator of socioeconomic status.

> Areas with high socioeconomic status were concentrated in industrialized urban portions of the Northeast and the west coast and scattered metro areas of the South, Midwest, and Rocky Mountain States. Low socioeconomic status was prevalent in areas with high percentages of minorities (Blacks, American Indians, Mexican-Americans, and Eskimos) and the predominantly White areas of the Ozarks and Appalachia. Socioeconomic status also appeared to be low in some highly agricultural counties of the Northern Plains and upper Midwest, but this may have been due to low farm prices in the base year which depressed median family income (p. 5).

Data for separate counties are reproduced in a supplement entitled *Indexes and Rankings for Indicators of Social Well-Being for U.S. Counties.* With the exception of Alcona, Clare, Houghton, Keweenaw, Lake, Missaukee, Montmorency, Ogemaw, and Oscoda, Michigan counties are above the U.S. average in socioeconomic status.

Factor II, health status, was specified by combining data on mortality from all causes, infant mortality, and mortality from influenza and pneumonia.

> Geographic patterns of U.S. health status . . . were similar to but less pronounced than those of socioeconomic status. Low health status was prevalent among southern counties with large percentages of Blacks and counties of the Southwest and West with large populations of Mexican-Americans, American Indians, and Eskimos. However in comparing geographic patterns of socioeconomic status with those of health status, three general differences are apparent. First, relative to all U.S. counties, health status was low in many northeastern counties, but these same counties were not generally low in socioeconomic status. Second, while many Appalachian counties had both low socioeconomic and health status, low health status was less pronounced. Third, in contrast to the low socioeconomic status of the Ozark counties, these counties generally did not have low health status. According to this index, health status was highest in the highly agricultural, predominantly White areas of the Plains States and the Midwest (p. 6).

Sixty-five of Michigan's eighty-three counties are above the national average in health status. The exceptions are Alger, Arenac, Baraga, Branch, Calhoun, Cass, Chippewa, Gogebic, Hillsdale, Houghton, Keweenaw, Lake, Ontonagon, Ogemaw, Osceola, Schoolcraft, Wayne, and Wexford.

Factor III, family status, was based on the proportion of dependent children living with both parents, the difference in the percentage of men and women in the labor force, and the percentage of families with female heads.

> Geographic patterns of family status . . . were generally similar to patterns of both socioeconomic and health status. As with the first two indexes, low family status was closely associated with high proportions of Blacks in the South, Eskimos in Alaska, and, to a lesser extent, Mexican-Americans and American Indians in the West and Southwest.
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> Regional indexes of family status were characterized by scores below the national average in both metro and nonmetro counties of the South and scores above the national average in both metro and nonmetro areas of the North Central region. Otherwise, nonmetro areas of the Northeast and West had higher average scores for family status than their metro counterparts in those regions (p. 13).

Thirty Michigan counties were below the U.S. average in family status. They are Alcona, Benzie, Berrien, Branch, Calhoun, Cheboygan, Clare, Crawford, Emmet, Gogebic, Grand Traverse, Houghton, Ingham, Ionia, Iron, Isabella, Jackson, Kalamazoo, Kalkaska, Keweenaw, Lake, Luce, Manistee, Mecosta, Muskegon, Roscommon, Van Buren, Washtenaw, Wayne, and Wexford.

Factor IV is alienation, for which no direct indicators are available at the county level. Instead, the authors used mortality from suicides and cirrhosis of the liver, both of which suggest high levels of personal alienation from group life.

> Geographic patterns of alienation . . . were substantially different from those for the other indexes. Areas of high alienation included a majority of counties in the Rocky Mountain and Pacific States; counties in northern portions of Michigan, Wisconsin, and Minnesota; some counties in Appalachia; the Southern Atlantic area; and upper New England. Counties with low levels of alienation included a large majority of southern counties exhibiting socioeconomic, health, and family status below the U.S. average. Alienation was also generally low in highly agricultural areas of the Plains States (p. 14).

In Michigan, fifty-two counties, nearly two-thirds, evidenced a higher degree of alienation than the U.S. average. Counties in which alienation was below the U.S. average are Allegan, Alpena, Antrim, Barry, Benzie, Clair, Clinton, Delta, Eaton, Emmet, Gladwin, Gratiot, Ingham, Isabella, Jackson, Kalkaska, Kent, Leelanau, Mackinac, Macomb, Mason, Midland, Missaukee, Monroe, Oceana, Ottawa, Saginaw, Sanilac, Schoolcraft, Tuscola, and Wexford.

According to the most recent analysis by the *Chronicle of Higher Education* (9 October 1979), Michigan ranked 35th in **annual appropriations for higher education,** gauged by ability to pay. The yardstick showed that Lansing appropriated $10.37 per $1,000 of personal income in the

state, compared with a national average of $11.16. Highest was Mississippi, with $17.59. New Hampshire appropriated least, $4.65.

In the percentage of increase in higher education appropriations between the academic years 1977–1978 and 1979–1980, Michigan ranked 23rd, with 22 percent. The national figure was 24 percent. California was first with 43 percent, and New Hampshire last with 8 percent.

The number of **local government employees** in Michigan per 100,000 population in 1977 varied from 790 in Mackinac County to 201 in Isabella. Most of the top twenty counties in the ranking are in northern Michigan, the exceptions being Branch and Ingham. All of the top five are Upper Peninsula counties. For Michigan as a whole, there were 347 local government employees per 100,000 inhabitants. The national figure was 355.

Production of raw steel in Michigan totaled 9.4 million tons during the first ten months of 1979, according to information recently released by the American Iron and Steel Institute. This figure represents a decline of 9 percent from the first ten months of 1978. During that period, Michigan produced 9.1 percent of the nation's raw steel. The figure so far this year is 8.1 percent.

Permits for industrial buildings in Michigan totaled $208.5 million during the first six months of 1979, according to the Bureau of the Census, compared with $2,862.5 million nationally. The Michigan figure is 7.3 percent of the national total. During 1978, Michigan accounted for 7.7 percent of total industrial building permits; during 1977, the figure was 7.5 percent.

In share of valuation of permits to build office buildings, Michigan accounted for 3 percent of the total during the first half of this year, compared with 2.7 percent during 1978 and 4.1 percent during 1977.

This state accounted for 4.2 percent of valuation of permits to build mercantile structures during the first six months of 1979, compared with 4.1 percent of the total during 1978 and 4.5 percent during 1977.

Corn prospects have improved since October, and Michigan farmers are now expected to harvest a record corn crop, according to the latest report from the Michigan Agricultural Reporting Service. Production is estimated at 198 million bushels, passing the record of 197 million set in 1977. Yields should average ninety bushels per acre, five bushels above the 1977 high.

Michigan is typical of the nation in this regard. U.S. production is forecast at 7.6 billion bushels, 7 percent above the 1978 record. Yields are expected to average 109 bushels per acre, also a record.

State **soybean production** is expected to reach a record 28.1 million bushels, with yields expected to avera twenty-nine bushels per acre—one bushel short of the 19 record yield, according to the Michigan Agricultural R porting Service. Production should exceed the 1978 lev by 47 percent because of a 21 percent increase in both yield and harvested acreage.

Nationally, soybean production is estimated at 2.24 billion bushels, 20 percent above the 1978 total, the previous record. Average yield is pegged at a record high of 31.8 bushels per acre.

Dry bean production in Michigan is estimated by the Michigan Agricultural Reporting Service at 6.86 million hundredweight, 7 percent above last season. Yields are expected to average 1,400 pounds per acre, seventy pounds shy of the 1963 record but substantially above the 1978 level of 1,150 pounds per acre. U.S. production is forecast at 19.8 million hundredweight, 4 percent more than last year.

Sugarbeet production in this state is estimated by the Michigan Agricultural Reporting Service at 1.6 million tons, a drop of 10 percent for 1978, due primarily to dry fall weather. The average yield declined to 17.5 tons per acre, compared with 18.5 tons per acre last year. U.S. production is forecast at 22 million tons, 14 percent less than the 1978 crop.

Each month since July, the Michigan Agricultural Reporting Service has been making **forecasts of acreage, yield, and production of the state's row crops,** principally corn, soybeans, dry beans, and sugarbeets. During the last few weeks of harvest, a survey was conducted to determine final acreage and production of these crops. About 6,000 farmers across the state were asked to provide information about their 1979 acreage and production by completing and returning a form mailed to them. Telephone calls were made to many of those who did not respond by mail.

Similar surveys will be completed in most states. Final national and state estimates will be released in mid-January and will be available in future issues of the Michigan Agricultural Reporting Service Report, *Agriculture Across Michigan.*

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